



# Space Weather Software

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# Space Weather

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- STEREO Space Weather Channel – 500 bits/s
- Original CCD image is 2048 x 2048 pixels
- 6-7 lossy (5x compressed) 256 x 256 pixel images per hour
- 2 lossless (2.3x compressed) 256 x 256 pixel images per hour
- 4x cadence with 128 x 128 pixel images
- 24/7 downlink
- STEREO Science Center and NOAA will coordinate ground based operations and coverage



# Draft Observing Plans

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- **Hourly Plan 7 256 x 256 pixel images**
  - 00 mins EUVI, COR1, COR2
  - 15 mins COR2
  - 30 mins EUVI, COR2
  - 45 mins COR2
- **Hourly Plan 28 128 x 128 pixel images**
  - EUVI every 5 minutes
  - COR1 every 6 minutes
  - COR2 every 10 minutes
- **“On the Hour” Plan 7 256 x 256**
  - 00 mins – 7 images - EUVI wavelength scan, COR2 polarizer scan

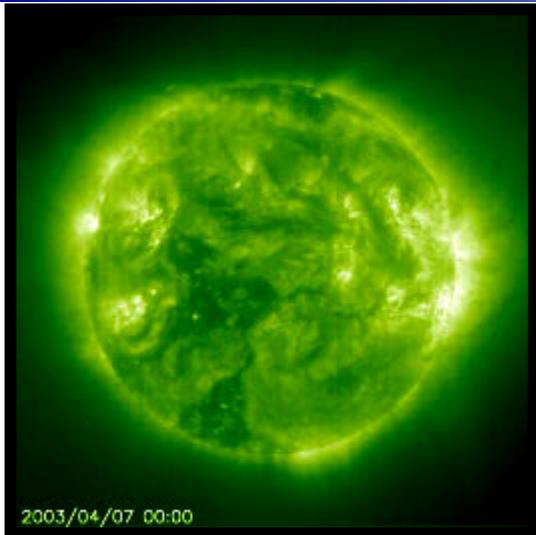


# Draft Space Weather Beacon Images

Telescope	FOV (Rsun)	256 x 256 Resolution Cadence CME Speed	128 x 128 Resolution Cadence CME Speed
EUVI	Disk – 1.7	12.8" 30 min 271 km/s	25.6" 5 min 1624 km/s
COR1	1.28 - 4	30" 60 min 526 km/s	60" 6 min 5259 km/s
COR2	2 - 15	240" 15 min 10053 km/s	480" 10 min 15080 km/s

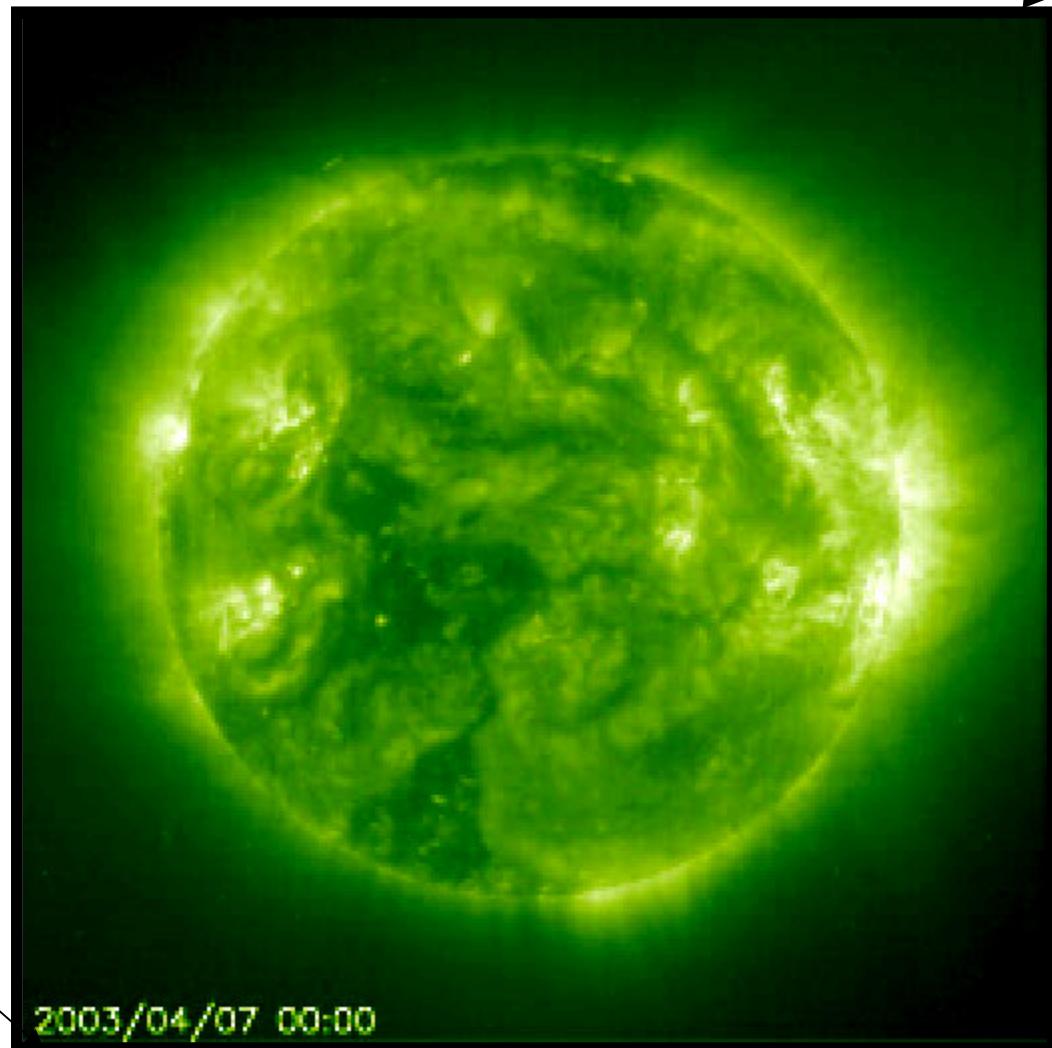


# 256 x 256 EIT Images

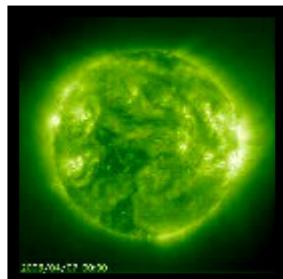


12 min cadence  
10.4''/pixel

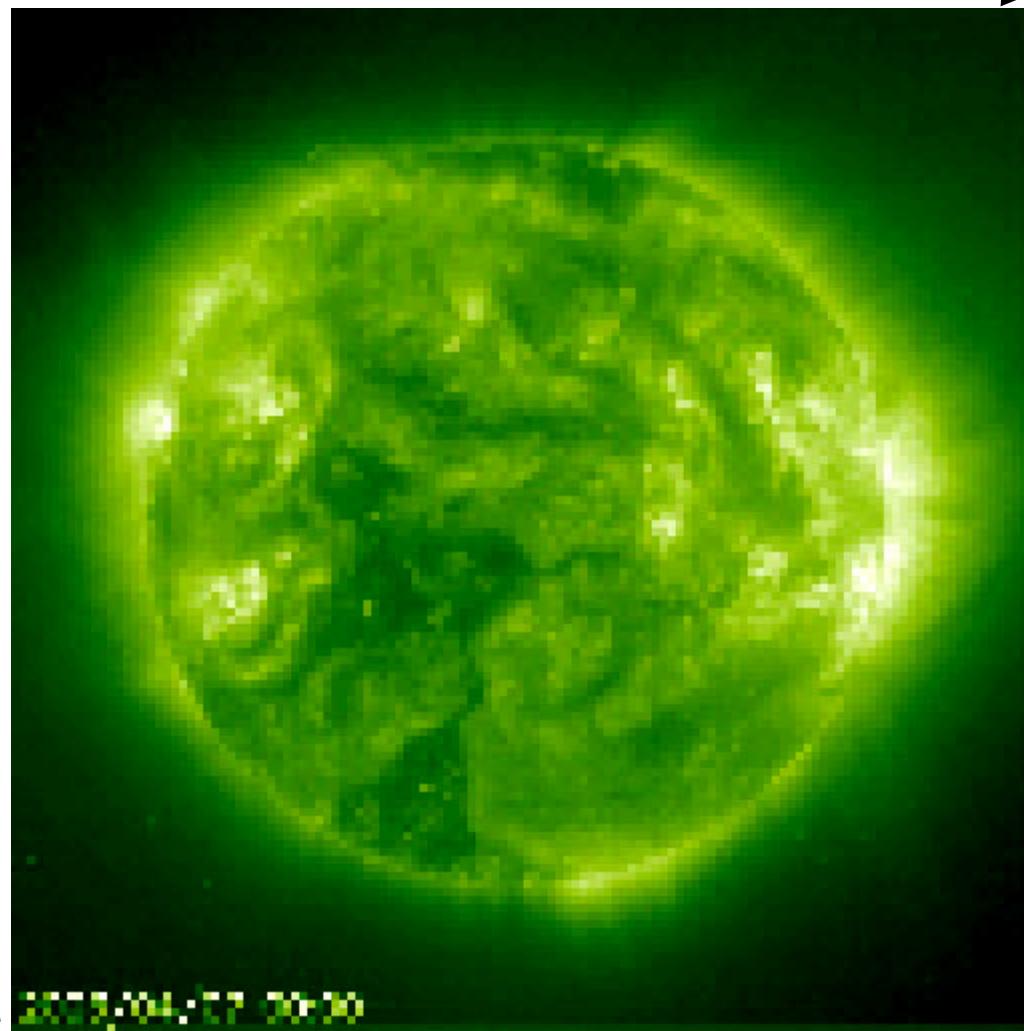
2x Enlargement



# 128 x 128 EIT Images

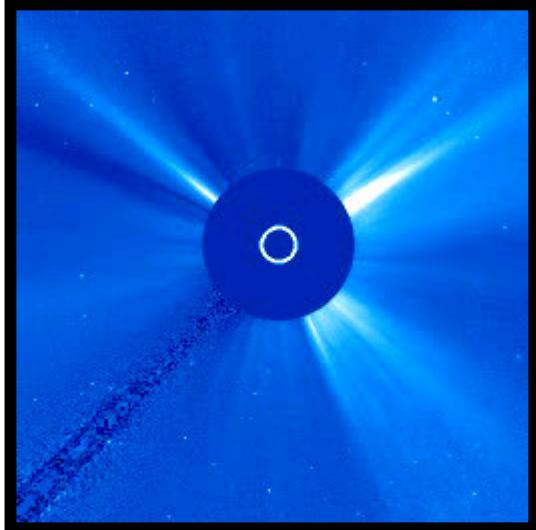


12 min cadence  
20.8''/pixel



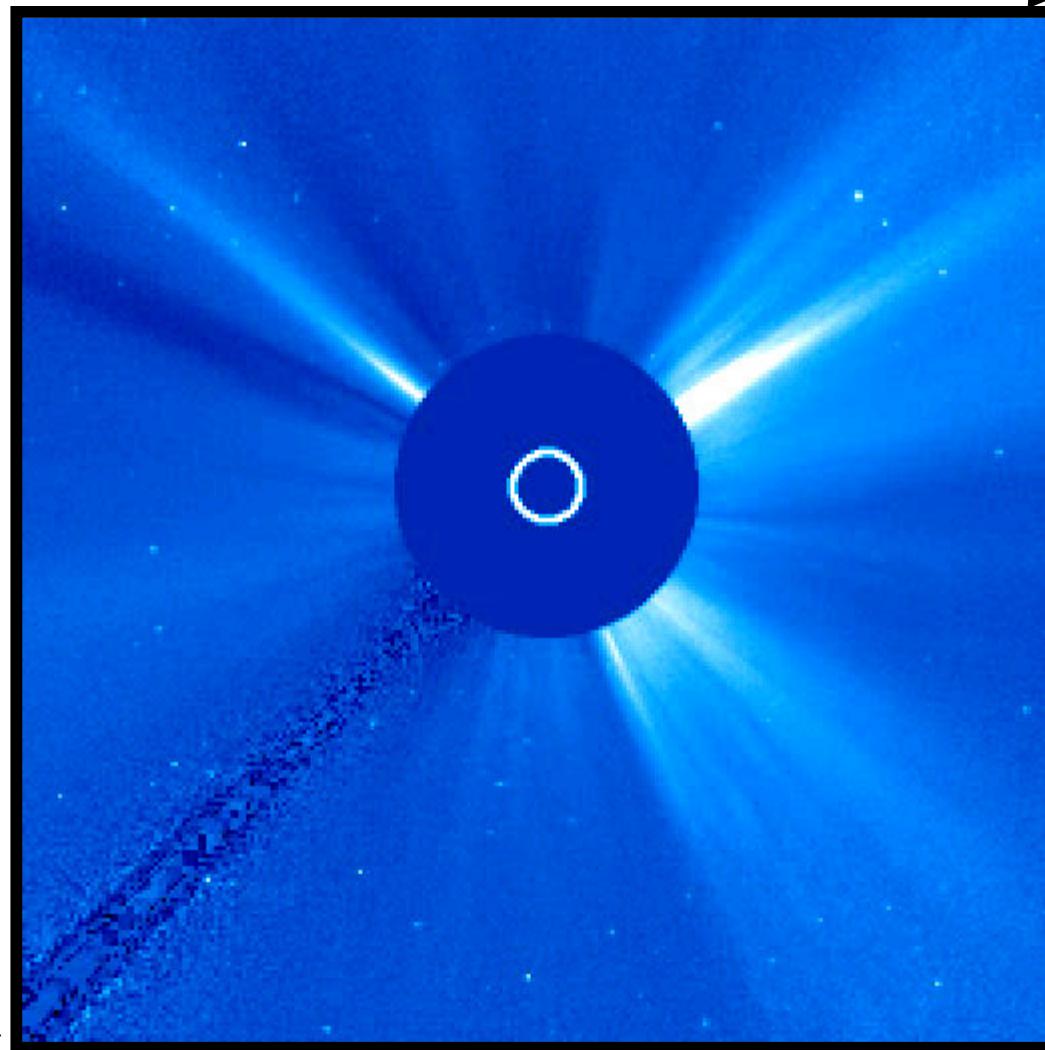
4x enlargement

# 256 x 256 LASCO C3 Images



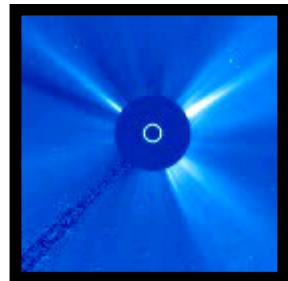
~30 min cadence  
224"/pixel

2x Enlargement



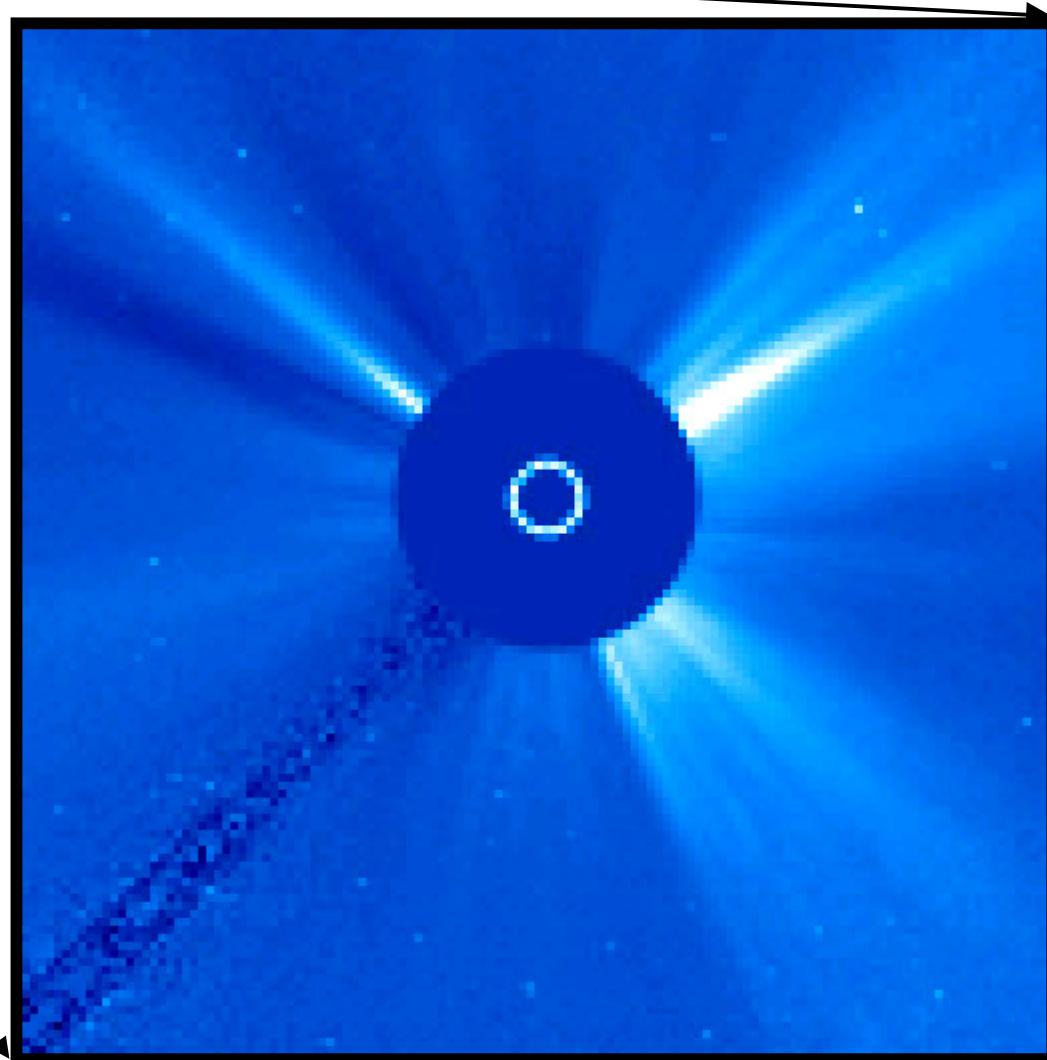
# 128 x 128 LASCO C3 Images

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**~30 min cadence  
448''/pixel**

**4x enlargement**



# Space Weather Beacon Questions

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- **Observing plan**
  - Piggyback on full resolution observing plan or some space weather beacon only images ?
  - Data latency – “On the Hour” or Steady data ? FSW RFA
  - Brightness or polarized images ?
  - EUVI wavelength scan ?
  - HI-1 or HI-2 data ?
- **Non-image data ?**
  - Brightest pixel in each 64 x 64 pixel block (32 x 32 pixel image)
  - Cosmic Ray Counts from HI Scrubbing
- **Do we generate SW Beacon images when we don't know someone is listening ?**

